

**We claim:**

1. A process for the preparation of a low contact resistance contact on a high transition temperature superconductor which comprises making a groove at the end of the superconductor, depositing a first silver layer by metal spray gun at a temperature  
5 120<sup>0</sup>C, heating the said deposited silver layer at a temperature in a range of 200-250<sup>0</sup>C for a time period in the range of 2-5 hrs, wrapping a perforated silver foil on the said heat treated first silver layer, depositing a second silver layer by metal spray gun at a temperature of 120<sup>0</sup>C, heating the said combination of first silver layer, wrapped perforated silver foil and second silver layer at a temperature in a range of  
10 830-850<sup>0</sup>C in air for a time period in the range of 100-150 hrs resulting in a joint with the superconductor.
2. A process as claimed in claim 1, wherein the high transition temperature superconductor is a hollow cylindrical tube of length in a range of 200-305mms.
3. A process as claimed in claim 2., wherein wall thickness of the tube is in a range of 1-  
15 3mms.
4. A process as claimed in claim 2, wherein outer diameter of the tube is in the range of 10-20 mms.
5. A process as claimed in claim 1, wherein high transition temperature superconductor is a solid rod of length in a range of 200-305 mms
- 20 6. A process as claimed in claims 1-5, wherein the high transition temperature superconductor is pure (Bi,Pb)<sub>2</sub> Sr<sub>2</sub> Ca<sub>2</sub> Cu<sub>3</sub>O<sub>10+x</sub>.
7. A process as claimed in claims 1-5, wherein the high transition temperature superconductor is (Bi,Pb)<sub>2</sub> Sr<sub>2</sub> Ca<sub>2</sub> Cu<sub>3</sub>O<sub>10+x</sub> with 10% silver.
8. A contact when made by the process of claim 1, wherein the contact resistance is in a  
25 range of  $3.07 \times 10^{-6}$  to  $3.0 \times 10^{-7} \Omega$  in zero applied magnetic field at 77K
9. Contact as claimed in claim 8, wherein the contact resistance is in a range of  $1.5 \times 10^{-8}$  to  $8.5 \times 10^{-8} \Omega$  in zero applied magnetic field at 4.2K